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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,316	07/25/2003	Timothy Neill	200208568-1	1916
22879	7590	12/16/2004	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			TRAN, CHUC	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/627,316

Applicant(s)

NEILL ET AL.

Examiner

Chuc D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/25/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims 25. Therefore, the “processor coupled to the radio transceiver” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 20, it is not clear how “a member disposed relative to the antenna to establish the defined load on the antenna works from the specification. It appears from the illustration that the metal of the housing disposed over the antenna to establish the defined load on the antenna. This description deems to conform with the depiction shown in Fig. 8.

Applicant is encouraged to implement this type of language in the interest of improving it's clarity.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kunert (USP. 5,682,299).

Regarding claim 1, Kunert disclose a radio module for an electrical device, comprising:

- a radio transceiver (10) (Fig. 1);
- an antenna (30) electrically coupled to the radio transceiver (10) (Fig. 1); and

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- a shield (12) disposed relative to the antenna to isolate the antenna from loading effects of components of the electrical device (Fig. 1) (Col. 5, Line 4).

Regarding claim 2, Kunert disclose that the radio module (10) is adapted to be secured to a side of the electrical device (Col. 1, Line 24).

Regarding claim 3, Kunert disclose that the radio module (10) comprising a printed circuit board (16) (Fig. 1), wherein the antenna (30) is disposed on the printed circuit board (16) (Fig. 1).

Regarding claim 4, Kunert disclose that the shield comprises a metal plate (12) coupled to the printed circuit board (16) (Fig. 1) (Col. 4, Line 46).

Regarding claim 5, Kunert disclose that the shield (12) is disposed relative to the transceiver (10) to isolate the transceiver from electromagnetic interference from electrical components within the electrical device (Col. 5, Line 4).

Regarding claim 6, Kunert disclose that the radio module further comprises a cover (12) disposed over the antenna (30) (Fig. 1) and adapted to extend through an opening in the side of the electrical device (Fig. 1), the cover comprising a material that is generally transparent to radio signals (Col. 4, Line 59).

Regarding claim 7, Kunert disclose that the shield (12) comprises a housing disposed around the antenna (30) (Fig. 1), the housing having a portion (20) generally transparent to radio signals from the antenna (Col. 4, Line 45).

Regarding claim 8, Kunert disclose that the housing is disposed around the transceiver (10) (Fig. 1).

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Regarding claim 9, Kunert disclose that the housing comprises a conductive metal (Col. 4, Line 1).

Regarding claim 10, Kunert disclose that the housing comprises a polymeric material having a conductive coating (Col. 4, Line 1).

Regarding claim 11, Kunert disclose that the housing comprises a periodic band-gap material (Col. 4, Line 14).

Regarding claim 12, Kunert disclose a radio module, comprising:

- a printed circuit board (16) (Fig. 1);
- an antenna (30) disposed on the printed circuit board (16) (Fig. 1); and
- an electromagnetic shield (12) extending from the printed circuit board (16) around the antenna (Fig. 3).

Regarding claim 13, Kunert disclose that the radio module comprising a radio transceiver (10) disposed on the printed circuit board (16) and electrically coupled to the antenna (30) (Fig. 1).

Regarding claim 14, Kunert disclose that the radio module is adapted to be coupled to an enclosure (Fig. 1) and, wherein, the electromagnetic shield (12) is adapted to extend from the printed circuit board to the enclosure (Col. 5, Line 4).

Regarding claim 15, Kunert disclose that the shield (12) comprises a portion (34) generally transparent to radio signals produced by the radio module (Col. 4, Line 30), the portion being disposed in facing relationship with the antenna (30) (Fig. 1).

Regarding claim 16, Kunert disclose that the antenna (30) is disposed within the enclosure (Fig. 1).

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Regarding claim 17, Kunert disclose that the radio module further comprises a cover (12) disposed over the antenna (30) (Fig. 1), the cover being generally transparent to radio signals at the operating frequency of the radio module (Col. 2, Line 5).

Regarding claim 18, Kunert disclose the shield comprises a metal plate (12) disposed on the printed circuit board (16) (Fig. 1) (Col. 4, Line 1).

Regarding claim 19, Kunert disclose that the metal plate (14) is disposed on the side of the printed circuit board (16) opposite the antenna (30) (Fig. 1) (Col. 4, Line 1).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Wagner et al (US. 2003/0125070).

Regarding claim 20, Wagner et al disclose a system, comprising:

- a plurality of electrical devices (Fig. 3); and
- a plurality of radio modules (20) disposed within the plurality of electrical devices to enable the plurality of electrical devices to communicate wirelessly (Fig. 3), wherein each of the plurality of radio modules comprises an antenna (52) adapted to provide a maximum output at a defined load (Page 2, Col. b, Line 47), and a member (34) disposed relative to the antenna (26) to establish the defined load on the antenna independent of components disposed within the electrical device in which the antenna is disposed (Page 2, Col. b, Line 6).

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Regarding claim 21, Wagner et al disclose that at least one member decouples the antenna electromagnetically from the components within the electrical device in which the antenna is disposed (Page 1, Col. a, Line 42).

Regarding claim 22, Wagner et al disclose that at least one member comprises a conductive metal plate disposed between the antenna and the components within the electrical device in which the antenna is disposed (Page 3, Col. b, Line 3) (Fig. 5).

Regarding claim 23, Wagner et al disclose that at least one radio module comprises a radio transceiver (20) coupled to the antenna (28) (Fig. 5) (Page 1, Col. a, Line 23) (Page 3, Col. a, Line 56).

Regarding claim 24, Wagner et al disclose at least one member is disposed around the radio transceiver (20) (Fig. 5).

Regarding claim 25, Wagner et al disclose that at least one of the plurality of electrical devices comprises a processor coupled to the radio transceiver (20) (Fig. 3) (Page 2, Col. b, Line 20) (Page 3, Col. b, Line 25).

Regarding 26, Wagner et al disclose that at least one antenna (26) is disposed on a printed circuit board (34) securable to an enclosure (Page 2, Col. b, Line 6) (Fig. 2).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.



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8. Claims 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Forrester et al (USP. 6,801,170).

Regarding claim 27, Forrester et al disclose a method of manufacturing a radio module for use within an electrical device, comprising:

- tuning an antenna to produce a maximum output at a defined load (Col. 6, Line 34); and
- disposing a shield relative to the antenna to establish the defined load on the antenna independent of influences external to the antenna within the electrical device (Col. 7, Line 25).

Regarding claim 28, Forrester et al disclose that disposing a shield comprises disposing an antenna housing (100) around the perimeter of the antenna (110) (Col. 3, Line 20) (Fig. 1).

Regarding claim 29, Forrester et al disclose that disposing a shield comprises

- disposing the antenna on a printed circuit board and disposing a conductive plate on the printed circuit board opposite the antenna (Fig. 4) (Col. 6, Line 45).

***Citation of relevant Prior Art***

Prior Art Mathews et al (USP. 6,686,649) disclose multi chip semiconductor package with integral shield and antenna.

Prior Art Sutton et al (USP. 6,504,710) disclose method of interconnecting of a hand held device.

Prior Art Cargin, Jr. et al (USP. 6,023,147) disclose hand held computerized data collection terminal.

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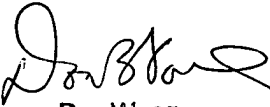
***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
December 12, 2004

  
Don Wong  
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